

Date: Sun, 7 Nov 93 04:30:35 PST
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V93 #96
To: Ham-Homebrew

Ham-Homebrew Digest Sun, 7 Nov 93 Volume 93 : Issue 96

Today's Topics:

 How to calibrate a DVM
 Looking for dials ...
 Rewinding transformers (3 msgs)

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 4 Nov 1993 16:21:14 GMT
From: fluke!rem@beaver.cs.washington.edu
Subject: How to calibrate a DVM
To: ham-homebrew@ucsd.edu

In article <2b3ol3\$np@gdls.gdls.com> turini@gdls.com (Bill Turini) writes:

>I have three digital voltmeters in my shack, none of which agree with the
>others.

>

>The problem I have is how to calibrate the voltage. I have heard that
>mercury cells like those used in cameras are quite stable and consistent
>in voltage and that they can be used to calibrate a meter. Has anyone had
>experience with this? Will it work? Is there a better way?

Some questions first. How far apart are the readings and what are the
specifications on the individual meters. If you assume there is a large
difference then something else may be wrong. If the difference is small
it could still be within the spec of the meter.

One thing you can do is find a meter that has been calibrated recently
say from a friend or at work and check the meters against it. Using
mercury cells can be tricky and not all meters are alike.

Randy
AJ7B

Date: Fri, 5 Nov 1993 11:29:23 +0000
From: usc!howland.reston.ans.net!pipex!uknet!demon!abacus!dmb@network.ucsd.edu
Subject: Looking for dials ...
To: ham-homebrew@ucsd.edu

Any homebrewers (esp. in the UK) know of a source for dials ? I'm building
a SW superhet, and looking for a decent dial/reduction drive to use for the
vfo, ideally something with about 36:1 reduction. I remember seeing a
reduction drive with selectable 6:1 and 36:1 ratios years ago, but can't
seem to get anything better than 10:1 these days. I could use a second
variable cap. in parallel with the primary cap. for electronic bandspread
I suppose, but I'd prefer to stay mechanical because I think calibrating
the freq. display dial will be easier.

Any help appreciated,

-David.
--

David Byrne, Abacus Software, London, UK Tel: +44 71 930 4884
Email: dmb@abacus.demon.co.uk Fax: +44 71 839 7445
Here's a koan: If you have ice-cream I will give you some. If you have none,
 I will take it away from you. (it's an ice-cream koan).

Date: Thu, 4 Nov 1993 16:46:20 GMT
From: convex!convex!cowart@uunet.uu.net
Subject: Rewinding transformers
To: ham-homebrew@ucsd.edu

robert@garfield.csd.unbsj.ca (Robert Ford) writes:

>Hi,

>I am curious to know if anybody has successfully managed to rewind an old
>TV transformer for a different voltage. I decided to take on the chore, but
>so far have met with many difficulties. The transformer was encased in some
>copper, but I managed to get through it. Next step was taking off most of
>the tape. Now comes the tough step. Removing the laminated sheets that make

I should also mention the obvious, the KVA rating of the "new" transformer must be equal to or less than the original. You can't get something for nothing.

Good luck,
Mike
WA5CMI

Date: 4 Nov 1993 13:28:40 GMT
From: usc!yeshua.marcam.com!zip.eecs.umich.edu!umn.edu!doug.cae.wisc.edu!zazen!news.uwsuper.edu!magoo!root@network.ucsd.edu
Subject: Rewinding transformers
To: ham-homebrew@ucsd.edu

Robert Ford (robert@garfield.csd.unbsj.ca) wrote:
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: so far have met with many difficulties. The transformer was encased in some
: copper, but I managed to get through it. Next step was taking off most of
: the tape. Now comes the tough step. Removing the laminated sheets that make
: up the core. They look like

I use to use a knife to break the plates apart. Usualyy only the edges were stuck and once loose would come apart. The first couple are a real bear thou. Good luck.

--
Patrick L. McGillan
Computer Systems Specialist
University Of Wisconsin Ph: (715) 394-8191
Superior, Wisconsin pmcgilla@magoo.uwsuper.edu

Sent from the keyboard of a real live machine running the Linux OS.

Date: Thu, 4 Nov 1993 22:52:57 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!news.moneng.mei.com!uwm.edu!linac!att!cbnews!gwk@network.ucsd.edu
Subject: Rewinding transformers
To: ham-homebrew@ucsd.edu

Date: (null)

From: (null)

--

* I don't speak for AT&T. * George Kinder gwk@cblpe.ATT.COM *
* AT&T doesn't speak for me. * AT&T Bell Laboratories (I think) *
* We both like it this way. * Columbus, Ohio 614-860-2238 *

Date: Sat, 6 Nov 1993 17:15:02 GMT

From: news.service.uci.edu!paris.ics.uci.edu!csulb.edu!csus.edu!netcom.com!

wa2ise@network.ucsd.edu

To: ham-homebrew@ucsd.edu

References <2bb029INN93f@news.uwsuper.edu>,

<1993Nov5.192134.17150@jupiter.sun.csd.unb.ca>, <wa2iseCG20MG.E8I@netcom.com>

Subject : Re: Rewinding transformers CORRECTION

In article <wa2iseCG20MG.E8I@netcom.com> wa2ise@netcom.com (I) wrote:

>Somebody mentioned how many turns per volt, and such. I wound some transformers
>back in high school days. Saw an article in a model railroad magazine (of all
>places!) that had an equation like:

>

>number of turns for 110 volt primary = 800 * square inch area of laminations,

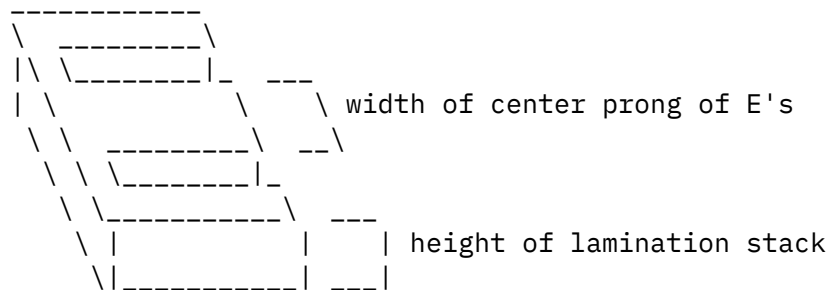
CORRECTION: should be 800 DIVIDE BY lamination area

>

>plane of which is the plane of the loop of wire that would form a single

>turn. Measure the height of the stack of all the E's laminations, and

>the width of the center prong of an E lamination.



>Once you have the number of required turns for the primary, you can easily

>figure number of turns per volt. pri turns/110 = turns per volt

>

>You have to have enough turns to keep the magnetic flux B low enough so

>the laminations don't saturate. If I remember my electromechanical devices

>class right, don't go above 1.5 for B. Don't remember what the units were

>called though. The idle (magnetic charging? current in the primary is kept

>lower by the permability of the laminations, than if it was air. But that's
>only good until you saturate the laminations with magnetism. When that
>happens, the idle current soars, and you get lots of i r heating, and most
>likely a smokey firey burnout!

>

>Go to the library or your double E dept and ask someone.

The bigger the transformar, the less turns it takes for the primary.

End of Ham-Homebrew Digest V93 #96
